SLOVENSKI STANDARD
SIST EN 26:2024

01-september-2024

Nadomešča:
SIST EN 26:2015

Pretočni plinski grelniki vode za pripravo tople sanitarne vode

Gas-fired instantaneous water heaters for the production of domestic hot water

Gasbeheizte Durchlauf-Wasserheizer für den sanitären Gebrauch

Appareils de production instantanée d'eau chaude pour usages sanitaires utilisant les combustibles gazeux

Ta slovenski standard je istoveten z: **EN 26:2023**

ICS:

91.140.65	Oprema za ogrevanje vode	Water heating equipment
97.100.20	Plinski grelniki	Gas heaters

SIST EN 26:2024 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 26

December 2023

ICS 91.140.65

Supersedes EN 26:2015

English Version

Gas-fired instantaneous water heaters for the production of domestic hot water

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This European Standard was approved by CEN on 8 May 2022.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 26:2023 E

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European foreword

This document (EN 26:202) has been prepared by Technical Committee CEN/TC 48 “Domestic gas-fired water heaters”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 26:2015.

The main technical changes compared to EN 26:2015 are the following:

— New or generally reworded requirements:

  — Separation between requirements and test methods in to different clauses;

  — Moving common parts from EN 15502-1 series when relevant and applicable;

prEN 13203-2:2021 provides a means of conforming to the Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/UE of the European Parliament and of the Council with regard to energy labelling of water heaters, hot water storage tanks and packages of water heaters and solar service, except on Sound power level (L_{WA}) covered by the present standard, see Clause 11.

prEN 13203-2:2021 provides a means of conforming to the Commission Regulation (EU) No 814/2013 of 2 August 2013 supplementing Directive 2009/125/EC of the European Parliament and of the Council with regard to eco design requirements for water heaters and hot water storage tanks, except on nitrogen oxides emissions (NO_X) covered by the present standard, see Clause 10.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document defines the specifications and test methods and also the classification, marking and energy labelling of gas-fired instantaneous water heaters for sanitary uses, hereafter called “water heaters”.

This document applies to water heaters:

— of types A, B and C as described at the appropriated clauses;

NOTE For more information on the configuration of the types of appliances, see EN 1749:2020.

— using one or more combustible gases corresponding to the three gas families and at the pressures stated in accordance to EN 437:2021;

— of nominal heat input not exceeding 77 kW based on the gross calorific value (GCV);

— with an ignition burner or with direct ignition of the main burner.

In this document, the heat inputs are expressed in relation to the net calorific value (*H*i).

This document does not contain all the requirements necessary for:

— boiling water appliances;

— appliances intended to be connected to a mechanical means of evacuating the combustion products;

— appliances which fulfil a dual role of space heating and heating water for sanitary use.

This document only covers water heaters where the fan, if any, is an integral part of the appliance.

This document is not intended to cover appliances designed and constructed to burn gas containing toxic components.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 88-1:2011+A1:2016, *Pressure regulators and associated safety devices for gas appliances — Part 1: Pressure regulators for inlet pressures up to and including 50 kPa*

EN 125:2010+A1:2015, *Flame supervision devices for gas burning appliances - Thermoelectric flame supervision devices*

EN 126:2012, *Multifunctional controls for gas burning appliances*

EN 161:2011+A3:2013, *Automatic shut-off valves for gas burners and gas appliances*

EN 298:2012, *Automatic burner control systems for burners and appliances burning gaseous or liquid fuels*

EN 437:2021, *Test gases - Test pressures - Appliance categories*

EN 513:2018, *Plastics - Poly(vinyl chloride) (PVC) based profiles - Determination of the resistance to artificial weathering*

EN 573-1:2004, *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 1: Numerical designation system*

EN 1057:2006+A1:2010, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1092-1:2018, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 1: Steel flanges*

EN 1092-2:1997, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 2: Cast iron flanges*

EN 1092-3:2003, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 3: Copper alloy flanges*

EN 1092-4:2002, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 4: Aluminium alloy flanges*

EN 1749:2020, *Classification of gas appliances according to the method of supplying combustion air and of evacuation of the combustion products (types)*

EN 1856-1:2009, *Chimneys - Requirements for metal chimneys - Part 1: System chimney products*

EN 1856-2:2009, *Chimneys - Requirements for metal chimneys - Part 2: Metal flue liners and connecting flue pipes*

EN 1859:2009+A1:2013, *Chimneys - Metal chimneys - Test methods*

EN 10088-1:2014, *Stainless steels — Part 1: List of stainless steels*

EN 10226-1:2004, *Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 13203-1:2015, *Gas fired domestic appliances producing hot water - Part 1: Assessment of performance of hot water deliveries*

prEN 13203-2:2021, *Gas-fired domestic appliances producing hot water —Part 2: Assessment of the energy consumption*

EN 13216-1:2019, *Chimneys — Test methods for system chimneys — Part 1: General test methods*

EN 13501-1:2018, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 13611:2019, *Safety and control devices for gas burners and gas burning appliances — General requirements*

EN 14241-1:2013, *Chimneys - Elastomeric seals and elastomeric sealants - Material requirements and test methods - Part 1: Seals in flue liners*

EN 14459:2015, *Safety and control devices for burners and appliances burning gaseous or liquid fuels - Control functions in electronic systems - Methods for classification and assessment*

EN 14471:2013+A1:2015, *Chimneys - System chimneys with plastic flue liners - Requirements and test methods*

EN 15036-1:2006, *Heating boilers - Test regulations for airborne noise emissions from heat generators - Part 1: Airborne noise emissions from heat generators*

EN 60335-1:2012, *Household and similar electrical appliances - Safety - Part 1: General requirements (IEC 60335-1:2010, modified)*

EN 60335-2-102:2016, *Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections (IEC 60335-2-102:2004)*

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN IEC 60730-2-9:2019, *Automatic electrical controls for household and similar use — Part 2: Particular requirements for heat sensing controls (IEC 60730-2-9:2015)*

EN ISO 178:2019, *Plastics - Determination of flexural properties (ISO 178:2019)*

EN ISO 179-1:2010, *Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (ISO 179-1:2010)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

EN ISO 527-1:2019, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:2019)*

EN ISO 527-2:2012, *Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:2012)*

EN ISO 1183-1:2019, *Plastics — Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2019)*

EN ISO 1183-2:2019, *Plastics - Methods for determining the density of non-cellular plastics - Part 2: Density gradient column method (ISO 1183-2:2019)*

EN ISO 1183-3:1999, *Plastics - Methods for determining the density of non-cellular plastics - Part 3: Gas pyknometer method (ISO 1183-3:1999))*

EN ISO 3166-1:2020, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes (ISO 3166-1:2020)*

EN ISO 9969:2016, *Thermoplastics pipes - Determination of ring stiffness (ISO 9969:2016)*

ISO 37:2017, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 262:1998, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts*

ISO 301:2006, *Zinc alloy ingots intended for castings*

ISO 815-1:2019, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 1: At ambient or elevated temperatures*

ISO 1817:2015, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 2781:2018, *Rubber, vulcanized or thermoplastic — Determination of density*

ISO 6914:2013, *Rubber, vulcanized or thermoplastic — Determination of ageing characteristics by measurement of stress relaxation in tension*

ISO 7619-1:2010, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness – Part 1: Durometer method (Shore hardness)*

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
instantaneous water heater
appliance where the heating of water is directly dependent on the draw off

3.1.1
instantaneous water heater with fixed output
appliance where the burner operates at a fixed heat input

3.1.2
instantaneous water heater with adjustable output
appliance where the heat input can only be reduced by operation of the manual gas rate control incorporated in the appliance

3.1.3
instantaneous water heater with automatic output variation (AVO)
appliance where the gas rate varies automatically so as to keep the hot water temperature within a predetermined range when the water delivery rate varies

3.1.3.1
thermostatic appliance
appliance with automatic output variation where the gas rate is varied by a thermostatic device controlling the water temperature, the set point of this device being adjustable or non-adjustable

3.1.3.2
proportioning appliance
appliance with automatic output variation where the gas rate is varied proportionally to the water rate, the factor of proportionality may be adjustable